AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the Application. No new matter has been introduced by way of the claim amendments. Current additions to the claims are noted with underlined text. Current deletions from the claims are indicated by text ~~strikethrough~~ or [[double bracketing]]. The status of each claim is indicated in parenthetical expression following the claim number.

WHAT IS CLAIMED IS:

1. (Currently Amended) A fluorescent ~~nanotube~~ ink comprising:

~~a~~ suspended~~sion of~~ carbon nanotubes; and

a solvent;~~, wherein the carbon nanotubes are operable for undergoing photoluminescence and yielding emission within a pre-determined range of wavelengths when irradiated with radiation in the visible region of the EM spectrum, and wherein the nanotube ink is formulated for adhesion to a substrate surface when such a surface is printed with said nanotube ink.~~

wherein the suspended carbon nanotubes comprise fluorescent carbon nanotubes;

wherein the fluorescent carbon nanotubes have a visible excitation and an emission following the visible excitation; and

wherein fluorescent ink is deposited on a surface; and

wherein the solvent is evaporated from the surface.

2. (Currently Amended) The fluorescent ~~nanotube~~ ink of Claim 1, wherein the fluorescent carbon nanotubes are selected from the group consisting of single-wall carbon nanotubes, multi-wall carbon nanotubes, double-wall carbon nanotubes, and combinations thereof.

3. (Currently Amended) The fluorescent ~~nanotube~~ ink of Claim 1, wherein the fluorescent carbon nanotubes comprise single-wall carbon nanotubes.

4. (Currently Amended) The fluorescent ~~nanotube~~ ink of Claim 1, wherein the suspended carbon nanotubes comprise carbon nanotubes having diameters less than about 3 nm.

5. (Currently Amended) The fluorescent ~~nanotube~~ ink of Claim 3, wherein the fluorescent carbon nanotubes comprise an essentially homogenous population of carbon nanotubes; ~~within the nanotube ink are substantially homogeneous with respect to their photoluminescence properties.~~

wherein the essentially homogenous population comprises a property selected from the group consisting of type, dimension, or species.

6. (Currently Amended) The fluorescent ~~nanotube~~ ink of Claim 3, wherein the fluorescent carbon nanotubes ~~within the nanotube ink comprise an artificially generated population of single wall carbon nanotubes of different nanotube species, such artificial generation provided by carbon nanotube separation techniques.~~ comprise separated carbon nanotubes;

wherein the separated carbon nanotubes have fluorescence properties tuned within a range of excitation and emission wavelengths.

7. (Currently amended) The fluorescent ~~nanotube~~ ink of Claim 3, wherein the solvent is ~~suspension comprises a liquid medium~~ selected from the group consisting of water, organic solvents, supercritical fluids, and combinations thereof.

8. (Currently Amended) The fluorescent ~~nanotube~~ ink of Claim 7, ~~wherein the suspension~~ further comprisinges a surfactant.

9. (Currently amended) The fluorescent ~~nanotube~~ ink of Claim 3, further comprising an additive selected from the group consisting of traditional fluorescent inks, dyes, binders, ~~polymeric material,~~ nanoparticles, magnetic materials, and combinations thereof.

10. (Currently amended) The fluorescent ~~nanotube~~ ink of Claim 3, wherein the ~~pre-determined range of wavelengths are in the near infrared.~~emission comprises a near-infrared emission.

11. – 75. (Cancelled)

76. (New) The fluorescent ink of Claim 1, wherein the fluorescent ink is deposited in patterned form.

77. (New) The fluorescent ink of Claim 1, wherein the carbon nanotubes are homogenized by electronic type.

78. (New) The fluorescent ink of Claim 3, further comprising a polymer.

79. (New) The fluorescent ink of Claim 3, wherein the carbon nanotubes are chemically derivatized.

80. (New) The fluorescent ink of Claim 3, wherein the fluorescent ink comprises an invisible ink.